

A REPORT OF THE HERITAGE CENTER FOR DATA ANALYSIS

NEW ANALYSIS SHOWS
VOTER IDENTIFICATION LAWS
DO NOT REDUCE TURNOUT

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NEW ANALYSIS SHOWS VOTER IDENTIFICATION LAWS DO NOT REDUCE TURNOUT

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OVERVIEW

The 2000 presidential election sparked a firestorm of debate relating to election reform in the United States. Since then, academics, the media, and elected officials have proffered opinions and implemented policies related to this important political issue. Topics that have been addressed in recent years range from modernizing voting machines and updating voter registration rolls to implementing stricter identification requirements for voting.

In 2002, Congress passed the Help America Vote Act (HAVA).¹ HAVA affects only federal elections and, among other things, requires that the states provide for provisional voting; create a computerized, centralized list of registered voters; and ensure that new voters who register by mail present identification before being allowed to vote in person. HAVA established the Election Assistance Commission (EAC) to serve as "a national clearinghouse and resource for information and review of procedures with respect to the administration of federal elections."² Additionally, many state legislatures have enacted their own election reform legislation.³

Of the many election reforms currently being considered, one that has incited some of the most cantankerous debate is that of voter identification at the polls. For many, the idea of requiring voters to present identification in order to vote is anathema, tantamount to the poll taxes that were once used to prevent African-Americans from voting.⁴ They contend that requiring identification at the polls will lead to lower voter turnout, especially among the poor, certain minorities, and the elderly. For others, such as the Protect Arizona Now organization that lobbied in favor of identification requirements for Arizona voters, the problem of voter fraud makes voter identification requirements a common-sense solution.⁵ The standard argument goes that if a person has to show identification to board a plane or cash a check, why shouldn't he have to do the same in order to vote? Additionally, the proponents of stricter voter identification requirements argue that such a policy would bolster the public's faith in the legitimacy of elections and lead to greater voter turnout, not less.

Both sides raise valid concerns. However, even a cursory glance at the literature on voter identification requirements shows that there is a dearth of

1. Public Law 107-252.
2. Election Assistance Commission, "About the EAC," at www.eac.gov/about.asp?format=none (June 28, 2007).
3. For a review of recent state legislative activity on voter identification laws, see National Council of State Legislatures, "Requirements for Voter Identification," February 1, 2007, at www.ncsl.org/programs/legismgt/elect/task/voteridreq.htm (July 23, 2007).
4. John Fund, *Stealing Elections: How Voter Fraud Threatens Our Democracy* (San Francisco: Encounter Books, 2004), p. 137.
5. Protect Arizona Now, "Background Information," at www.pan2004.com/background.htm (July 24, 2007).

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empirical research on this issue. While there have been a few studies to address the effect of voter identification requirements using election data,⁶ more research is needed in order to appropriately assess the legitimacy of either side's claims.

In response to this debate, the EAC awarded a grant to Rutgers University's Eagleton Institute of Politics and the Moritz College of Law at Ohio State University to study voter identification requirement laws. The resulting study, *Report to the U.S. Election Assistance Commission on Best Practices to Improve Voter Identification Requirements Pursuant to the Help America Vote Act of 2002*,⁷ included a statistical analysis of the effect of voter identification requirements on voter turnout during the 2004 election by Professor Timothy Vercellotti of the Eagleton Institute.⁸ A new version of the analysis with Timothy Vercellotti and David Anderson as authors was presented to the 2006 American Political Science Association conference.⁹ Hereinafter, this study will be referred to as the "Eagleton Institute study."

The Eagleton Institute study found that more stringent voter identification requirements appeared to reduce voter turnout in 2004.¹⁰ In the media, their study has been cited as demonstrating that the strengthening of voter identification requirements to reduce fraud has the side effect of suppressing minority voter turnout.¹¹

This Center for Data Analysis report attempts to replicate the part of the Eagleton Institute study that used the publicly available November 2004 Current

Population Survey (CPS).¹² This analysis was done because several aspects of the Eagleton Institute study cast doubt on the validity of its findings:

- The Eagleton Institute used one-tailed hypothesis tests instead of the more commonly accepted two-tailed tests. The one-tailed test allows researchers to double their chances of finding statistically significant results.
- The 2004 voter identification laws of certain states were misclassified. For example, Arizona and Illinois were incorrectly classified as requiring voters to provide identification and state their name for authentication, respectively. However, in 2004 Arizona only required voters at polling stations to sign their name for authentication, while Illinois required poll workers to match the signatures of voters.
- Some of the variables used to predict the decision to vote were used inappropriately. For example, the Eagleton Institute study used the November 2004 CPS family income variable, which is an ordinal variable of unequal income ranges, as an interval-ratio variable. Using categorical variables as interval-ratio variables can lead to estimation problems.

After addressing these issues, our reanalysis finds that some of the original findings of the Eagleton Institute study are unfounded. Controlling for factors that influence voter turnout, voter identification laws largely do not have the negative impact on voter turnout that the Eagleton Institute suggests. When statistically significant and negative relation-

6. Timothy Vercellotti and David Anderson, "Protecting the Franchise, or Restricting It? The Effects of Voter Identification Requirements on Turnout," American Political Science Association conference paper, Philadelphia, Pa., August 31–September 3, 2006, and John R. Lott, Jr., "Evidence of Voter Fraud and the Impact that Regulations to Reduce Fraud Have on Voter Participation Rates," Department of Economics, SUNY Binghamton, August 18, 2006.
7. *Report to the U.S. Election Assistance Commission on Best Practices to Improve Voter Identification Requirements Pursuant to the Help America Vote Act of 2002*, Eagleton Institute of Politics, Rutgers, The State University of New Jersey, and Moritz College of Law, Ohio State university, June 28, 2006.
8. Timothy Vercellotti, "Appendix C: Analysis of Effects of Voter ID Requirements on Turnout," in *Report to the U.S. Election Assistance Commission on Best Practices to Improve Voter Identification Requirements Pursuant to the Help America Vote Act of 2002*.
9. Vercellotti and Anderson, "Protecting the Franchise, or Restricting It?"
10. *Ibid.*
11. Christopher Drew, "Lower Voter Turnout Is Seen in State that Require ID," *The New York Times*, February 21, 2007, p. A16; Richard Wolf, "Study: Stricter Voting ID Rules Hurt '04 Turnout," *USA Today*, February 19, 2007, p. A5; Matthew Murray, "EAC Blasted Again for Burying Study," *Roll Call*, April 9, 2007; Tom Baxter and Jim Galloway, "Wonk Alert: Study Says the Heavier the Voter ID Requirements, the Lower the Turnout," *Atlanta Journal-Constitution*, February 21, 2007, Metro News.
12. Current Population Survey, November 2004: Voting and Registration Supplement, machine-readable data file, conducted by the Bureau of the Census for the Bureau of Labor Statistics, 2005.

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ships are found, the effects are so small that the findings offer little policy significance. For example, our analysis indicates that:

- White survey respondents in photo identification states are 0.002 percent less likely to report voting than white respondents from states that only required voters to state their name.
- African-American respondents in non-photo identification states are 0.012 percent less likely to report voting than African-American respondents from states that only required voters to state their name.

In other cases, no effect was found.

- In general, respondents in photo identification and non-photo identification states are *just as likely* to report voting compared to respondents from states that only required voters to state their name.
- African-American respondents in photo identification states are *just as likely* to report voting compared to African-American respondents from states that only required voters to state their name.
- Hispanic respondents in photo identification states are *just as likely* to report voting compared to Hispanic respondents from states that only required voters to state their name.

BACKGROUND

When discussing voting behavior, it is important to consider the factors that influence whether an individual votes or not. According to the "Calculus of Voting" model, an individual will vote when the rewards from voting are positive and will abstain when they are not. The equation for the Calculus of Voting model is as follows:

$$R = PB - C + D.$$

The rewards (R) from voting are determined by multiplying the benefits (B) an individual receives when his preferred candidate wins over a less preferred candidate by the probability (P) that his vote will make a difference plus the benefits one receives from voting as an act of fulfilling one's duty or civic obligation (D) minus the costs of voting (C).¹³ This is the standard, rational model of voting and will be used to inform the following discussion of voter identification requirements and their effect on voter turnout.

The voter identification issue is often framed as being torn between the opposing aims of "access and integrity."¹⁴ By this we mean that it is commonly perceived that while voter identification laws may be effective at preventing ineligible individuals from voting (integrity), they may have an adverse effect on the ability of every eligible voter to vote (access). There have been only a few empirical studies on the impact of voter identification requirements,¹⁵ but this does not translate into a lack of opinions on this topic.

Advocates for more stringent voter identification laws contend that this reform is vital to prevent voter fraud.¹⁶ As more and more elections are won by slim margins, proponents of identification requirements argue that the chances are greater that voter fraud could affect election outcomes.¹⁷ The potential for a small number of voters to have a significant impact on the outcome of an election became all too evident in the 2000 presidential election. Given that George W. Bush was declared the winner in Florida (and the next President) by a margin of 537 votes, it follows that even a small number of fraudulent votes (537+1) would matter a great deal.¹⁸ In 2004, there were allegations of voter fraud in the Washington gubernatorial election in which Christine Gregoire won by a margin of 129

13. William Riker and Peter Ordeshook, "A Theory of the Calculus of Voting," *The American Political Science Review*, Vol. 62, No. 1 (March, 1968), pp. 25-42.
14. Spencer Overton, "Voter Identification," *Michigan Law Review*, Vol. 105, No. 631 (February 2007), p. 636.
15. Lott, "Evidence of Voter Fraud and the Impact that Regulations to Reduce Fraud Have on Voter Participation Rates," and Vercellotti and Anderson, "Protecting the Franchise, or Restricting It?"
16. Protect Arizona Now, "Background Information."
17. Commission on Federal Election Reform, *Building Confidence in U.S. Elections*, September 2005, p. 18, at www.american.edu/iacfer/report/full_report.pdf (July 24, 2007). Additionally, John Fund writes that "Election fraud... can be found in every part of the United States, although it is probably spreading because of the ever-so-tight divisions that have polarized the country and created so many close elections lately." Fund, *Stealing Elections*, p. 5.
18. M.V. Hood III and Charles S. Bullock, "Worth a Thousand Words? An Analysis of Georgia's Voter Identification Statute," April 2007, p.1, at [http://electionlawblog.org/archives/GA%20Voter%20ID%20\(Bullock%20&%20Hood\).pdf](http://electionlawblog.org/archives/GA%20Voter%20ID%20(Bullock%20&%20Hood).pdf) (July 24, 2007).

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votes.¹⁹ Certainly the potential of voter fraud is a matter of concern.

Broadly defined, voter fraud is "the intentional corruption of the electoral process by voters."²⁰ While voter fraud manifests itself in different forms, examples include individuals who vote but are ineligible (such as non-citizens and felons), individuals who vote multiple times in various precincts, and individuals who vote using someone else's name. Because of the lack of research and the difficulty of collecting data on voter fraud, the extent to which these kinds of voter fraud occur is unknown. Additionally, for similar reasons, we are unaware of the extent to which voter identification laws would curb the type of voter fraud they are intended to prevent.

However, there are some examples of recorded voter fraud. The Department of Justice asserts that since the inception of the Attorney General's Ballot Access and Voting Integrity Initiative in 2002, 120 people have been charged with election fraud, of which 86 have been convicted.²¹ Additionally, the *Milwaukee Journal Sentinel* reports that prosecutors in Milwaukee filed charges against 14 individuals for voter fraud in the 2004 election.²² Of the 14, 10 were felons accused of voting and four were accused of double voting. Prosecutors obtained five convictions. For proponents of strict voter identification requirements, the knowledge that any voter fraud

occurs is sufficient to argue that more needs to be done to curb this problem.²³

The most prevalent critique of the voter fraud argument is that "voter-fraud anecdotes are often misleading, incomplete, and unrepresentative."²⁴ Proponents of this view contend that upon closer examination of claims of voter fraud, such charges turn out to be either nonexistent or infrequent. For instance, the Brennan Center for Justice at the New York University School of Law found that in 2004, voter fraud occurred 0.0009 percent of the time in the gubernatorial election in Washington and 0.00004 percent of the time in Ohio. They report that these percentages are akin to the likelihood of an American's being killed by lightning.²⁵

Opponents of voter identification requirements also argue that the few instances of voter fraud that may be prevented by identification laws do not outweigh the thousands of legitimate voters who would be disenfranchised because they lacked the necessary identification.²⁶ These critics argue that identification laws will have a negative impact on the ability of certain minorities, the elderly, the disabled, and the poor to vote.²⁷ It is presumed, and some studies have found, that people from these groups are less likely to possess drivers' licenses or other government-issued identification.²⁸ It is also assumed that many from these groups would be unable or unwilling acquire the necessary docu-

19. Commission on Federal Election Reform, *Building Confidence in U.S. Elections*, p. 4.

20. Lorraine Minnite, "The Politics of Voter Fraud," Project Vote, p. 6, at http://projectvote.org/fileadmin/ProjectVote/Publications/Politics_of_Voter_Fraud_Final.pdf (July 24, 2007).

21. U.S. Department of Justice, "Fact Sheet: Protecting Voting Rights and Prosecuting Voter Fraud," press release, October 31, 2006, at www.usdoj.gov/opa/pr/2006/November/06_crt_738.html (July 23, 2007).

22. Bill Glauber, "Her first vote put her in prison; Woman is one of five from city convicted of voter fraud," *Milwaukee Journal Sentinel*, May 21, 2007, p. A1.

23. Overton, "Voter Identification," p. 648.

24. *Ibid.*, p. 644.

25. Brennan Center for Justice at NYU School of Law, "The Truth About Voter Fraud," September 2006, p. 1, at www.brennancenter.org/dynamic/subpages/download_file_38347.pdf (July 24, 2007).

26. Brennan Center for Justice at NYU School of Law and Spencer Overton, "Response to the Report of the 2005 Commission on Federal Election Reform," September 19, 2005, p. 2, at www.carterbakerdissent.com/final_carterbaker_rebuttal092005.pdf (July 24, 2007).

27. *Ibid.*, p. 3.

28. See John Pawasarat, "The Driver License Status of the Voting Age Population in Wisconsin," June 2005, at www.uwm.edu/Dept/ETI/barriers/DriversLicense.pdf (July 24, 2007); Hood and Bullock, "Worth a Thousand Words?"; and Brennan Center for Justice at NYU School of Law, "Citizens Without Proof: A Survey of Americans' Possession of Documentary Proof of Citizenship and Photo Identification," November 2006, at www.federalectionreform.com/pdf/Citizens%20Without%20Proof.pdf (July 25, 2007).

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mentation. Critics of strict identification laws further argue that the costs (in both time and money) of obtaining such documentation would be a deterrent to voting and would likely result in lower voter turnout among poor voters and those who do not have easy access to government offices.²⁹ It is for this reason that "ID requirements are compared to modern poll taxes."³⁰

While it is difficult to accurately assess the number of eligible voters who would be rendered unable to vote because they lack proper identification, some studies have attempted to estimate such figures by looking at the percentage of the population who do not have driver's licenses. For instance, a Wisconsin study found that when considering the entire state, 80 percent of men and 81 percent of women had valid driver's licenses. In contrast, only 45 percent of African-American men and 51 percent of African-American women had valid driver's licenses. The percentages for Latinos were also lower (54 percent for men and 41 percent for women).³¹ Similarly, a Georgia study found that among registered voters, non-whites, women, and the elderly were less likely to have government-issued photo identification (either a driver's license or state identification).³²

Although these figures shed light on the types of people who are less likely to have driver's licenses, it is unadvisable to focus on this statistic alone. First, the data still cannot tell us whether those individuals without driver's licenses have some other form of identification, such as an employee ID, student ID, social security card, or any other form of identification currently accepted in many states. Second, it cannot tell us about future behavior. Do voters in photo identification states who lack the necessary identification obtain the required identification (such as a driver's license) when the state law is

changed? Take for instance the previous study conducted in Wisconsin, which currently does not require identification before voting (except for those requirements set forth in HAVA for new voters). Although approximately half of African-Americans in the state are currently without driver's licenses, we do not know if those individuals will get driver's licenses or state IDs if Wisconsin were to require voters to show identification before voting.

For these reasons, proponents of voter identification requirements are convinced that requiring identification at the polls would not be an excessive burden to voters. As previously mentioned, identification is required for many things that are considerably less important than voting (flying in a plane, buying alcohol, etc.). As "voting is equally important," if not more important, the argument goes that it makes sense for someone to be required to show identification in order to cast a ballot.³³ Additionally, Senior Research Scientist John Lott at the University of Maryland Foundation points out that as "almost 100 countries require photo identifications to vote," the United States would be hardly alone in requiring voters to show some form of identification at the polls.³⁴

Those who oppose voter identification at the polls argue that other reforms are better suited to preventing voter fraud. For instance, critics of voter identification point to absentee ballots as "the Achilles heel of election security" because voters are often not required to show identification at all.³⁵ Yet absentee ballots have been largely left out of the voter identification requirement debate. This apparent discrepancy has been used by opponents of voter identification laws as evidence that supporters of such legislation are not interested in real voter fraud reform.³⁶ Rather, critics argue that voter identification supporters are using such laws

29. Task Force on the Federal Election System, John Mark Hansen, "Chapter 6: Verification of Identity," July 2001, p. 4, at www.tcf.org/Publications/ElectionReform/NCFER/hansen_chap6_verification.pdf (July 24, 2007).

30. Timothy Ryan, "Voter ID Laws Need Measured Implementation," AEI-Brookings Election Reform Project Newsletter, April 17, 2007, at www.reformelections.org/commentary.asp?opedid=1555 (July 24, 2007).

31. Pawasarat, "The Driver License Status of the Voting Age Population in Wisconsin," p. 3.

32. Hood and Bullock, "Worth a Thousand Words?" p. 14.

33. Commission on Federal Election Reform, *Building Confidence in U.S. Elections*, p. 18.

34. Lott, "Evidence of Voter Fraud and the Impact that Regulations to Reduce Fraud Have on Voter Participation Rates," p. 2.

35. Ryan, "Voter ID Laws Need Measured Implementation."

36. Editorial, "Voter Suppression in Missouri," *The New York Times*, August 10, 2006, p. 22, and Lott, "Evidence of Voter Fraud and the Impact that Regulations to Reduce Fraud Have on Voter Participation Rates," p. 6.

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as an attempt to suppress voter turnout by increasing the costs of voting (the "C" from the Calculus of Voting model).³⁷

Another argument proffered by supporters of voter identification requirements is that such laws are necessary to maintain the public's faith in the integrity of elections. The Commission on Federal Election Reform (Carter-Baker Commission) at American University asserts that "the electoral system cannot inspire public confidence if no safeguards exist to deter or detect fraud or to confirm the identity of voters."³⁸ This argument, "the ensuring integrity hypothesis," contends that public faith in the honesty of elections actually "encourages additional voter participation."³⁹ Proponents argue that voter identification laws will bolster the public's faith in the outcome of elections. This will increase, not decrease, turnout because voters will feel a greater pride in voting (increasing the "D" or duty component of voting).

Voter identification laws are exceptionally popular among the general public. In a survey of some 36,000 voters, Professors Stephen Ansolabehere and Elting R. Morison of the Massachusetts Institute of Technology found that 77 percent of respondents supported voter identification requirements.⁴⁰ For the most part, the majority of respondents supported such laws regardless of race, location (Northeast, Midwest, etc.), and political ideology. While those who identified themselves as conservatives had the highest percentage of agreement with identification requirements (at 95 percent), even those who identified themselves as "very liberal" had 50 percent agreement with voter identification laws.⁴¹ Regarding race, more than 70 percent of whites,

African-Americans, and Hispanics supported voter identification laws.⁴² Additionally, Ansolabehere found only 23 instances out of 36,000 where an individual reported being unable to vote because he lacked the necessary identification.⁴³

These survey data are supported by actual voter behavior. In 2004, when Arizonans voted on Proposition 200, which would require voter identification at the polls as evidence of citizenship, it passed with 56 percent of the vote.⁴⁴

Ultimately, it is not the intent of this paper to debate the merits of either side's arguments. Rather, we want to present the major arguments on either side of this issue as background to our analysis. However, the paper does intend to examine more closely one of the claims of this debate: that stricter voter identification requirements depress voter turnout. In order to do that, it is necessary to discuss the different voter identification requirements across the 50 states and the District of Columbia.

Voter identification requirements, if any, differ by state, so there is great variability in the way voters from different parts of the country are required to verify their identity before casting a ballot. Some states rely on the honor system where voters merely have to give their names to the election official.⁴⁵ Other states only require a signature,⁴⁶ with some states going a step further and actually matching the signature to a previously signed document.⁴⁷ States with more stringent requirements ask that voters provide identification⁴⁸ or photo identification.⁴⁹

The Eagleton Institute study identified two categories of identification requirements (maximum

37. Editorial, "Voter Suppression in Missouri."

38. Commission on Federal Election Reform, *Building Confidence in U.S. Elections*, p. 18.

39. Lott, "Evidence of Voter Fraud and the Impact that Regulations to Reduce Fraud Have on Voter Participation Rates," p. 4.

40. Stephen Ansolabehere and Elting R. Morison, "Access Versus Integrity in Voter Identification Requirements," Department of Political Science, Massachusetts Institute of Technology, February 2007, at http://web.mit.edu/polisci/portl/cces/material/NYU_Identification1.pdf (July 24, 2007).

41. *Ibid.*, p. 4.

42. *Ibid.*, p. 5.

43. *Ibid.*, p. 7.

44. Election returns obtained from Arizona Secretary of State's Web site at www.azsos.gov/election/2004/General/Canvass2004General.pdf.

45. As of 2004, such states included Maine, New Hampshire, and Rhode Island, among others.

46. For instance, California, the District of Columbia, and Michigan were all "sign name" states in 2004.

47. Nevada, Oregon, and Pennsylvania were all "signature match" states in 2004.

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requested and minimum required) and five types of identification requirements (stating name, signing name, signature match, present ID, and photo ID).⁵⁰ It is important to note that in 2004, there were no states that had photo ID as a minimum requirement. All states that had a photo ID requirement permitted voters who did not have such documentation to present alternative forms of ID or sign an affidavit attesting to their identity.⁵¹

By the maximum requested, the Eagleton Institute study refers to the most identification that an individual can be asked to present in order to vote using a regular ballot. Conversely, the minimum is the least identification that will be accepted to vote.⁵² For example, when voting in Louisiana in 2004, a voter would be asked by poll workers to present photo identification. If the individual was unable to present an acceptable form of ID, he was allowed to vote after signing an affidavit stating he is the person he claims to be.⁵³ In that case, photo ID would be the maximum requested, and affidavit would be the minimum required.

Within the states that require some form of documentation as proof of identity, there are also significant differences. For instance, some states, like Massachusetts, "may" ask that a voter show identification, but identification is not automatically requested of all voters.⁵⁴ In Alabama and Alaska, two states that request identification, this requirement can be waived if a poll worker knows the voter and can attest to his identity.⁵⁵ This is an important issue to consider because it means that different voters within the same state may be affected by different identification requirements.

Furthermore, by the 2004 election, many states had become compliant with certain provisions in the Help America Vote Act (HAVA) which required identification at the polls from first-time voters who registered by mail and who did not show identification at the time of registration. One state, Pennsylvania, actually went above and beyond HAVA requirements and mandated that all first-time voters needed to show identification at the polls regardless of whether they showed identification when they registered to vote.⁵⁶ Because of HAVA, many first-time voters had to show identification at the polls even in states that did not otherwise require identification from all voters.

Even among states that require documentation, there is great variability in the types of documentation that is accepted. Some accept only a government-issued photo identification, while others accept almost any document that demonstrates a person's identity. For example, in 2004, acceptable documentation in Florida ranged from a driver's license and passport to credit card and buyer's club card to utility bill, bank statement, or paycheck (as long as they contained the name and address of the individual).⁵⁷ In contrast, some states that required identification to vote are much more restrictive with respect to acceptable forms of identification. One such state, Virginia, only allowed voters to present a voter registration card, Social Security card, employer-issued identification card (as long as it contained a photo), Virginia driver's license, or other Commonwealth or government-issued identification.⁵⁸ Furthermore, in many states, individuals who are unable to provide the appropriate documentation are given an alternative, such as signing

48. Alabama, Alaska, and Connecticut are just a few of the states that required voters to show some form of identification at the polls in 2004.

49. Florida, Hawaii, Louisiana, South Carolina, and South Dakota were all of the states requiring photo ID during the 2004 election.

50. *Report to the U.S. Election Assistance Commission on Best Practices to Improve Voter Identification Requirements Pursuant to the Help America Vote Act of 2002*, p. 8.

51. *Ibid.*, p. 9.

52. *Ibid.*

53. La. R.S. 18:562.

54. 950 C.M.R. § 53.03(5B); 950 C.M.R. § 54.04(6B).

55. Ala. Code § 17-9-30; Alaska Statute § 15.15.225.

56. Pa. Stat. Ann. Tit. 25 § 3050.

57. West's Fla. Stat. Ann § 101.043.

58. Va. Code Ann. § 24.2-643.

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an affidavit, in order to vote. Finally, Section 302 of HAVA requires that an individual who fails to meet the identification requirements of voting can still vote using a provisional ballot.⁵⁹

The key aspects of this brief overview of identification requirements of voting is that there is a lot of variability by states as to what is required, and not all identification requirements are created equal. By that we mean that required identification documentation for one state may not meet the identity requirements in another state. This is just one of the reasons that it is particularly difficult to study the effect of such laws on voter turnout.

THE DATA

In order to analyze individual voter turnout, this study uses data from the U.S. Census Bureau's Current Population Survey, November 2004: Voting and Registration Supplement File.⁶⁰ The November 2004 CPS voting supplement contains interviews from about 57,000 households. Based on self-described registered voters, the data allow us to model the decision to vote based on individual and household characteristics.

Dependent Variable. The dependent variable is whether or not the respondent reported that he or she voted in the November 2004 election. Respondents who admitted to not being registered voters were omitted, along with those reporting that they were not United States citizens. We also omitted those reported to be voting through absentee ballots.⁶¹

According to the U.S. Census Bureau's analysis of the November 2004 CPS data, 89 percent of registered voters voted in the November 2004 election.⁶² This estimate is drawn from a sample of respondents reporting to be registered voters and is much higher than estimates based on samples of the

voting-age population. However, the EAC estimates that 70.4 percent of registered voters turned out to vote.⁶³ The CPS estimate of 89 percent may be biased upward because it is based on the reported vote, which may be overstated because survey respondents may be disinclined to admit that they did not vote.⁶⁴ When turnout is based on the total population over 18 years old, 55.8 percent of persons over age 18 voted.⁶⁵

Voter Identification Requirements. The voter identification requirements included in the analysis capture the degree to which a registered voter has to prove his or her identity at the polling station. Two sets of five dichotomous voter identification variables are used in the analysis. The first set is based on the maximum amount of identification that the voter is required to produce in order to prove his or her identity. The maximum state voter identification requirements are broken down into the following classification: state name, sign name, match signature, provide non-photo identification, and provide photo identification. Table 1 presents the voter identification classifications by state used by the Eagleton Institute and the Moritz College of Law at Ohio State University.

For all but two of the states, Illinois and Arizona, we used the classifications that were provided to us by the Eagleton Institute. We recoded these two states because upon researching state election laws, we discovered that the Eagleton Institute had erroneously reported the identification requirements for these two states. The Eagleton Institute study has Illinois listed as a "state name" state. In actuality, Illinois poll workers match a prospective voter's signature to a signature already on file, making Illinois a "match signature" state.⁶⁶

The Eagleton Institute has Arizona listed as a "provide ID" state although Arizona was a "sign

59. Public Law 107-252.

60. Current Population Survey, November 2004: Voting and Registration Supplement.

61. To account for Oregon's elections that are conducted entirely through mail, Oregon voters are treated in this analysis as if they vote in person in the polling booth. Oregon is classified as a signature match state for voter identification purposes.

62. U.S. Census Bureau, "U.S. Voter Turnout Up in 2004, Census Bureau Reports," press release, May 26, 2004, at www.census.gov/Press-Release/www/releases/archives/voting/004986.html (July 2, 2007).

63. Kimball W. Brace and Michael P. McDonald, *Final Report of the 2004 Election Day Survey*, U.S. Election Assistance Commission, September 27, 2005, at www.eac.gov/election_survey_2004/pdf/EDS-Full_Report_wTables.pdf (July 5, 2007).

64. William H. Flanagan and Nancy H. Zingale, *Political Behavior of the American Electorate*, 11th edition (Washington, D.C.: CQ Press, 2006).

65. Brace and McDonald, *Final Report of the 2004 Election Day Survey*.

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Table I

CDA 07-04

Maximum and Minimum Voter Identification Requirements, November 2004 Election

State	Eagleton Institute Maximum Requirement	Corrected Maximum Requirement	Eagleton Institute Minimum Requirement
Alabama	Provide non-photo ID	Provide non-photo ID	Provide non-photo ID
Alaska	Provide non-photo ID	Provide non-photo ID	Provide non-photo ID
Arizona	Provide non-photo ID	Sign name	Provide non-photo ID
Arkansas	Provide non-photo ID	Provide non-photo ID	State name
California	Sign name	Sign name	Sign name
Colorado	Provide non-photo ID	Provide non-photo ID	Provide non-photo ID
Connecticut	Provide non-photo ID	Provide non-photo ID	Provide non-photo ID
Delaware	Provide non-photo ID	Provide non-photo ID	State name
District of Columbia	Sign name	Sign name	Sign name
Florida	Provide photo ID	Provide photo ID	Swear affidavit
Georgia	Provide non-photo ID	Provide non-photo ID	Provide non-photo ID
Hawaii	Provide photo ID	Provide photo ID	Provide non-photo ID
Idaho	Sign name	Sign name	Sign name
Illinois	State name	Match signature	State name
Indiana	Sign name	Sign name	Swear affidavit
Iowa	Sign name	Sign name	Sign name
Kansas	Sign name	Sign name	Sign name
Kentucky	Provide non-photo ID	Provide non-photo ID	Provide non-photo ID
Louisiana	Provide photo ID	Provide photo ID	Swear affidavit
Maine	State name	State name	State name
Maryland	Sign name	Sign name	Sign name
Massachusetts	State name	State name	State name
Michigan	Sign name	Sign name	Sign name
Minnesota	Sign name	Sign name	Sign name
Mississippi	Sign name	Sign name	Sign name
Missouri	Provide non-photo ID	Provide non-photo ID	Provide non-photo ID
Montana	Provide non-photo ID	Provide non-photo ID	Provide non-photo ID
Nebraska	Sign name	Sign name	Sign name
Nevada	Match signature	Match signature	Match signature
New Hampshire	State name	State name	State name
New Jersey	Match signature	Match signature	Match signature
New Mexico	Sign name	Sign name	Sign name
New York	Match signature	Match signature	Sign name
North Carolina	State name	State name	State name
North Dakota	Provide non-photo ID	Provide non-photo ID	Swear affidavit
Ohio	Match signature	Match signature	Match signature
Oklahoma	Sign name	Sign name	Sign name
Oregon	Match signature	Match signature	Match signature
Pennsylvania	Match signature	Match signature	Match signature
Rhode Island	State name	State name	State name
South Carolina	Provide photo ID	Provide photo ID	Provide non-photo ID
South Dakota	Provide photo ID	Provide photo ID	Provide non-photo ID
Tennessee	Provide non-photo ID	Provide non-photo ID	Match signature
Texas	Provide non-photo ID	Provide non-photo ID	Provide non-photo ID
Utah	State name	State name	State name
Vermont	State name	State name	State name
Virginia	Provide non-photo ID	Provide non-photo ID	Provide non-photo ID
Washington	Sign name	Sign name	Sign name
West Virginia	Match signature	Match signature	Sign name
Wisconsin	State name	State name	State name
Wyoming	State name	State name	State name

Sources: Eagleton Institute of Politics, Rutgers; State University of New Jersey; and Moritz College of Law, Ohio State University, Report to the U.S. Election Assistance Commission on Best Practices to Improve Voter Identification Requirements Pursuant to the Help America Vote Act Of 2002, June 28, 2006, at www.eac.gov/docs/VoterIDReport%20062806.pdf (July 30, 2007), and author's personal communication with Timothy Vercellotti (June 1, 2001).

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name" state at the time of the 2004 election.⁶⁷ Identification laws did not go into effect in Arizona until some time after the 2004 election. Arizona could not have been a "provide ID" state before the November 2004 election because Arizonans voted on and approved Proposition 200 on the November 2004 ballot. This initiative is the impetus for the requirement that voters show identification before voting as proof of citizenship.⁶⁸

The second set of voter identification variables recognizes that some states allow voters without proper identification to vote after demonstrating their identity through other means. This minimum requirement set of variables includes state name, sign name, match signature, provide non-photo identification, and swear affidavit. For the probit regressions, the variable for voters stating their names for identification is omitted for reference purposes.

Individual Factors. The individual factors included in the analysis capture differences in the race and ethnicity, age, education, household income, marital status, gender, employment status, citizenship, residential mobility, and home ownership of the individual respondents. Controlling for such variables as education and age is important because research indicates that these variables are good predictors of voting turnout.⁶⁹ The analysis controls for the effect of the individual's race and ethnicity through a set of mutually exclusive dichotomous variables for the following categories: non-Hispanic white, non-Hispanic African-American, Hispanic, non-Hispanic American Indians, non-Hispanic Asians (including Hawaiians/Pacific Islanders), and other races, including those reporting multiple races and ethnicities. The specification

of these variables allows us to compare the voting patterns of minorities to those of whites.

A set of dichotomous variables control for the age of the individual respondents that fall into the following categories: 18- to 24-year-olds, 25- to 44-year-olds, 45- to 64-year-olds, and 65 years and older. For education, the respondents were classified as either having less than a high school diploma, high school diploma or equivalent, some college, bachelor's degree, or a graduate school degree.

For family income, the Eagleton Institute study used an ordinal family income variable as an interval-ratio variable.⁷⁰ The family income variable is coded as 1 through 16 with units containing unequal income ranges. For the purposes of this analysis, the effect of family income is controlled for by the inclusion of a series of income range dichotomous variables: under \$15,000, \$15,000 to \$29,999, \$30,000 to \$49,999, \$50,000 to \$74,999, \$75,000 to \$149,999, and \$150,000 or more.

To control for the influence of marital status, five dichotomous variables signifying being single, married, separated, divorced, and widowed are included in the model. Single individuals are the default. A dichotomous variable identifying the gender of the individual as a female is also included in the models.

Two dichotomous variables are included to control for the effect of employment. The first is a dichotomous variable signifying whether or not the individual is employed; the second is a dichotomous variable for whether or not the person is in the labor force.

To control for whether native-born citizens are more likely to vote than naturalized citizens, a dichotomous variable identifying native-born citi-

66. Documentation supporting the signature match requirement can be found at the following: ILCS 5/6-66; electionline.org, Election Reform Briefing, April, 2002, p. 12, at www.electionline.org/Portals/1/Publications/Voter%20Identification.pdf; Punchcard Manual of Instructions for Illinois Election Judges, 2005, at www.elections.il.gov/Downloads/ElectionInformation/PDF/03selfsec.pdf; and Election Law @ Moritz, 50 Questions for 5 States, Illinois, last updated 1/19/07, at moritzlaw.osu.edu/electionlaw/election06/50-5_Illinois.php#14.

67. Arizona Secretary of State, 2004 Ballot Propositions, "Instructions to Voters and Election Officers," September, 2004, at www.azsos.gov/election/2004/Info/PubPamphlet/Sun_Sounds/english/contents.htm.

68. The text of Proposition 200 is available at www.pan2004.com/docs/initiative_petition.pdf.

69. Flanigan and Zingale, *Political Behavior of the American Electorate*.

70. The variable "HUFAMINC" in the November 2005 CPS has the following coding: 1 for less than \$5,000; 2 for \$5,000 to \$7,499; 3 for \$7,500 to \$9,999; 4 for \$10,000 to \$12,499; 5 for \$12,500 to \$14,999; 6 for \$15,000 to \$19,000; 7 for \$20,000 to \$24,999; 8 for \$25,000 to \$29,999; 9 for \$30,000 to \$34,999; 10 for \$35,000 to \$39,999; 11 for \$40,000 to \$49,999; 12 for \$50,000 to \$59,999; 13 for \$60,000 to \$74,999; 14 for \$75,000 to \$99,999; 15 for \$100,000 to \$149,999; and 16 for \$150,000 or more.

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zens is included. Two dichotomous variables are included to control for community ties. The models control for whether or not the individual has moved within the last year and whether or not the individual owns or rents his or her home. These two variables are included to help control for social connectedness under the theory that those with stronger community ties will be more likely to vote.

State Political Factors. As with the Eagleton Institute study, two dichotomous variables indicate whether a state is considered a battleground state and a competitive state. A state is designated as a battleground state if the margin of victory for the winning 2004 presidential candidate was 5 percent or less. A state was designated as competitive if the margin of victory for governor and/or U.S. Senate races was 5 percent or less.

FINDINGS

The probit regression analyses that follow examine the effects of voter identification requirements on voter turnout. Table 2 presents the original findings of the Eagleton Institute's probit regression analysis. Table 3 presents the descriptive statistics

of the data used in Table 4. Based on our analyses, six sets of probit regression models are presented in Tables 4 to 9.

The first set of probit regressions contains our replication of the Eagleton Institute study for their analysis of all voters (Table 4). The second set of probit regressions presents the findings for all voters under a different model specification and the corrected classification of state identification requirements for Arizona and Illinois (Table 5). The sixth through ninth sets of probit regressions present our findings for the different model specification and corrected coding for state identification requirements for whites, African-Americans, Hispanics, and Asians (Tables 6 through 9).

For all of the models, robust standard errors are estimated to correct for correlated error terms within each state. For tests of statistical significance, the standard two-tailed tests are used. See below for a discussion of one-tailed versus two-tailed tests of statistical significance. The calculations in Tables 3 through 9 use the CPS weight, PWSSWGT, as recommended by the Bureau of the Census.

ONE-TAILED VERSUS TWO-TAILED TESTS OF STATISTICAL SIGNIFICANCE

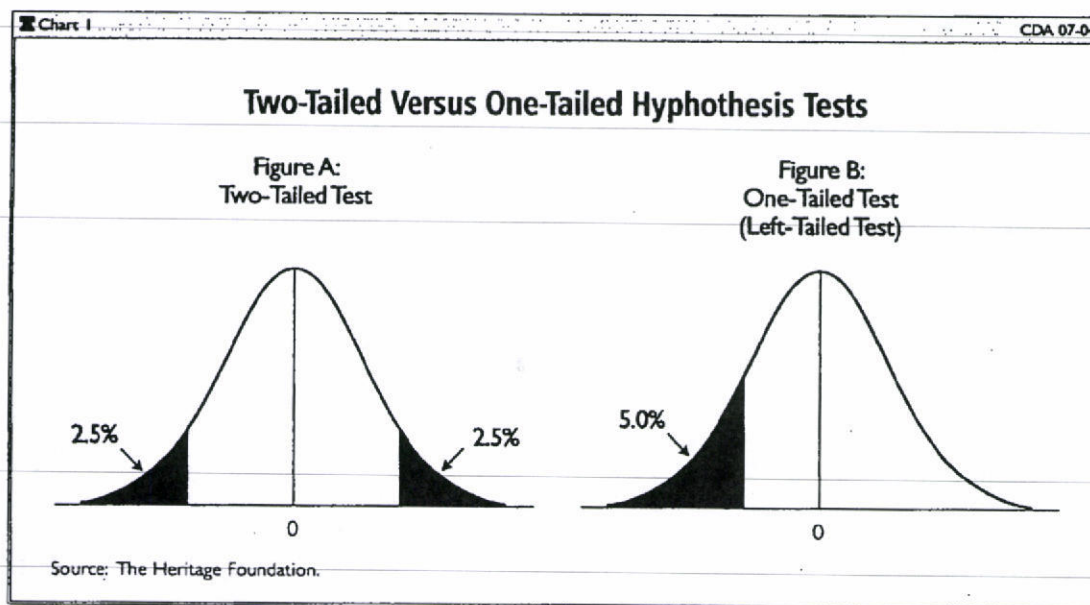
When doing tests of statistical significance for hypotheses, social scientists generally use two-tailed tests. Two-tailed tests are used to check for a difference while ignoring in which direction the difference lies.

For example, a social scientist would use a two-tailed test to determine whether voters in photo identification and give name states have different probabilities of reporting having voted in the 2004 election, regardless of the direction of the relationship. By using a two-tailed test, the 5 percent probability is split between both ends of the bell-shaped curve. (See Figure A in Chart 1.) That is, 2.5 percent of the probability that the difference is due to chance is placed in the side that represents respondents in photo identification states being less likely to vote, while 2.5 percent is placed in the side that represents respondents in photo identification states being more likely to vote. If the probit coefficient for photo identification states falls within either of the 2.5 percent shaded regions, this finding is determined to be statistically significant. If the coefficient falls within the left (right) tail, photo identification requirements have a negative (posi-

tive) relationship with reported voter turnout. If the coefficient falls between the 2.5 percent shaded regions, photo identification requirements are said to have no relationship with voter turnout.

When one-tailed tests are used, social scientists are hypothesizing that the relationship between photo identification requirements and reported voting has a specific direction: for example, voter identification requirements decrease (increase) reported voting. As determined by the social scientist, all of the 5 percent of chance is placed in one end of the bell-shaped curve. If the direction of the relationship is as hypothesized, placing the entire 5 percent chance in one side makes it twice as easy to achieve a statistically significant finding with a one-tailed test as with a two-tailed test. Figure B in Chart 1 is an example of a one-tailed test where the researcher believes a negative relationship exists. In the case of photo identification requirements and voter turnout, if the coefficient falls within the 5 percent shaded region of the left tail, photo identification requirements would then be said to have a negative relationship. If the coefficient does not fall within the 5 percent region, then photo identifica-

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tion requirements are said to have no relationship with voter turnout.

According to norms of the social sciences, researchers generally use two-tailed tests. When they deviate from this norm, social scientists gen-

erally provide a justification for why they have done so. Consumers of statistical research should be skeptical of findings based on one-tailed tests, especially when such findings do not hold up under two-tailed testing.

Replicating the Eagleton Institute's Findings for All Voters

Table 2 contains the findings from the Eagleton Institute's probit regression for all registered voters as presented in their paper. Table 3 presents the findings from our attempt to replicate the Eagleton Institute study findings for all voters. In our attempt at replicating the Eagleton Institute's study, we could not entirely match the same number of respondents. The Eagleton Institute's probit regression of all voters is based on 54,973 respondents.⁷¹ Our best attempt at replicating their analysis produced 54,829 respondents—144 fewer respondents. In addition, the results reported in Table 3 use the more commonly accepted two-tailed significance tests.

While the Eagleton Institute reported that states with sign name, non-photo identification, and photo identification requirements have lower voter turnout than states with only the state name requirement, only the photo identification coefficient in our attempt at replication (Model 1) is statistically significant at the 95 percent confidence

level. Respondents from photo identification states are less likely to have reported voting compared to respondents in states that only required voters to say their names at the polling stations. The magnitude of the negative relationship between photo identification requirements and voter turnout is difficult to interpret with probit coefficients, so the elasticity was calculated. The elasticity figures used in this analysis represent the percentage change in the probability of reporting to vote given a one-unit change in a particular dichotomous independent variable. The survey respondents in photo identification states are 0.002 percent less likely to report voting than respondents from states that only required voters to give their name for identification.

Model 2 corrects for the Eagleton Institute study's misclassification of the voter identification requirements in Arizona and Illinois. With the correction, all of the state voter identification variables are statistically insignificant—meaning that none of these requirements has a statistically measurable relationship with voting turnout.

71. Vercellotti and Anderson, "Protecting the Franchise, or Restricting It?" Table 3, p. 23.

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Model 3 attempts to replicate the findings of the Eagleton Institute's examination of the effect of minimum requirements. As seen in Table 2, the Eagleton Institute found that the coefficients for sign name, non-photo identification, and swear affidavit states had statistically significant, negative relationships with voter turnout using one-tailed significant tests. However, our analysis presented in Model 3 using two-tailed statistical significance tests finds only the swear affidavit coefficient to be statistically significant at the 95 percent confidence level. The survey respondents in swear affidavit states are 0.002 percent less likely to report voting than respondents from states that only required voters to state their name for identification.

It should be noted that although we ran the minimum identification requirement model using the classifications assigned to the states by the Eagleton Institute study, there are some issues with the states considered to have an affidavit as the minimum requirement. These issues should be addressed in follow-up studies. First, the Eagleton Institute study identified only four states as having a minimum requirement of sign affidavit. They are Florida, Indiana, Louisiana, and North Dakota. All but one of these states, Indiana, require some form of identification as the maximum requested. This puts Indiana in the precarious position of requiring, at a maximum, that a voter sign his name before receiving a ballot; if he is unable to do so, he can sign an affidavit and vote. This does not make sense, because Indiana in 2004 did not require identification before voting (other than for those affected by HAVA requirements).

We believe this to be another classification error on the part of the Eagleton Institute. According to the "2004 Indiana Election Day Handbook," the

Table 2

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Copies of Eagleton Institute's Probit Models of Voter Turnout

Variable	Maximum Requirement		Minimum Requirement	
	Coefficient	Robust S.E.	Coefficient	Robust S.E.
Sign name	-0.11*	0.05	-0.08*	0.04
Match signature	-0.04	0.05	-0.03	0.05
Non-photo ID	-0.16**	0.06	-0.15**	0.05
Photo ID	-0.17**	0.07	—	—
Affidavit	—	—	-0.23**	0.06
Hispanic	-0.08	0.05	-0.08	0.05
African-American	0.24**	0.04	0.24**	0.04
Asian American	-0.37**	0.07	-0.38**	0.07
Age 25-44	0.004	0.02	0.003	0.02
Age 45-64	0.26**	0.03	0.26**	0.03
Age 65+	0.43**	0.03	0.43**	0.03
High school	0.31**	0.02	0.31**	0.02
Some college	0.57**	0.03	0.57**	0.03
College	0.88**	0.04	0.88**	0.04
Graduate school	0.98**	0.05	0.98**	0.05
Household income	0.03**	0.003	0.03**	0.003
Married	0.23**	0.02	0.23**	0.02
Female	0.10**	0.01	0.10**	0.01
Battleground state	0.17**	0.04	0.18**	0.04
Competitive race	0.05	0.06	0.05	0.05
Employed	0.05	0.05	0.05	0.05
Member of workforce	-0.05	0.05	-0.05	0.05
Native-born citizen	0.02	0.04	0.02	0.04
Moved within past 6 months	-0.29**	0.03	-0.29**	0.03
Constant	-0.09	0.10	-0.09	0.09
Pseudo R-squared	0.09		0.10	
N	54,973		54,973	

* p < 0.05 ** p < 0.01 *** p < 0.001

Note: One-tailed significance tests were used.

Source: Timothy Vercellotti and David Anderson, "Protecting the Franchise, or Restricting It? The Effects of Voter Identification Requirements on Turnout," American Political Science Association conference paper, Philadelphia, Pa., August 31–September 3, 2006, p. 23, Table 3.

procedure for signing an affidavit only applies to challenged voters who are then given a provisional ballot if they sign the affidavit.⁷² This voting method would not fall under the guidelines set forth by the Eagleton Institute because it applies to provisional, and not regular, ballots.⁷³ For these reasons, we believe Indiana should have a minimum identification requirement of sign name, the same as its maximum.

Additionally, there are five other states (Connecticut,⁷⁴ Delaware,⁷⁵ Georgia,⁷⁶ South Dakota,⁷⁷

72. Indiana Election Division, "2004 Indiana Election Day Handbook: A Guide for Precinct Election Boards and Poll Workers," December 2003, pp. 13–17.

73. Report to the U.S. Election Assistance Commission on Best Practices to Improve Voter Identification Requirements Pursuant to the Help America Vote Act of 2002, p. 8.

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Table 3

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Replicating Vercellotti: Probit Models of Overall Voter Turnout Based on the Eagleton Institute's Specification

Variable	Maximum Requirement				Minimum Requirement	
	Model 1		Model 2		Model 3	
	Replication		Recoded States		Replication	
	Coefficient	Robust S.E.	Coefficient	Robust S.E.	Coefficient	Robust S.E.
Sign name	-0.08	0.04	-0.06	0.06	-0.03	0.05
Match signature	-0.01	0.05	0.01	0.06	-0.02	0.07
Non-photo ID	-0.10	0.06	-0.10	0.07	-0.08	0.06
Photo ID	-0.10*	0.05	-0.10	0.06	—	—
Affidavit	—	—	—	—	-0.10*	0.05
Hispanic	-0.08	0.05	-0.08	0.05	-0.08	0.05
African-American	0.29***	0.04	0.29***	0.05	0.24**	0.05
Asian American	-0.45***	0.07	-0.45***	0.08	-0.46**	0.07
Age 25-44	-0.01	0.02	-0.01	0.03	-0.11	0.03
Age 45-64	0.27***	0.03	0.27***	0.03	0.27***	0.03
Age 65+	0.44***	0.03	0.44***	0.03	0.45***	0.03
High school	0.32***	0.03	0.32***	0.25	0.32***	0.03
Some college	0.61***	0.03	0.61***	0.03	0.61***	0.03
College	0.90***	0.04	0.90***	0.04	0.90***	0.04
Graduate school	1.04***	0.05	1.04***	0.05	1.05***	0.05
Household income	0.04***	0.003	0.04***	0.003	0.04***	0.003
Married	0.21***	0.03	0.21***	0.03	0.21***	0.03
Female	0.10***	0.02	0.10***	0.02	0.10***	0.02
Battleground state	0.20***	0.04	0.20***	0.04	0.21***	0.05
Competitive race	-0.03	0.06	-0.02	0.06	-0.02	0.06
Employed	0.03	0.05	0.03	0.05	0.03	0.05
Member of workforce	0.07	0.06	0.07	0.06	0.07	0.07
Native-born citizen	-0.02	0.05	-0.01	0.05	-0.02	0.05
Moved within past 6 months	-0.36***	0.04	-0.36***	0.04	-0.36***	0.04
Constant	-0.11	0.09	-0.12	0.10	-0.13	0.09
Pseudo R-squared	0.10		0.10		0.10	
N	54,829		54,829		54,829	

* p < 0.05 ** p < 0.01 *** p < 0.001

Note: Two-tailed significance tests were used. Robust standard errors adjusted for state clustering are reported. The CPS population weights were used.

Source: Heritage Foundation calculations.

and Virginia⁷⁸) that require some form of identification but make exceptions and allow voters without the required documentation to sign an affidavit in order to vote. To be classified correctly, these states should also be considered to have a minimum requirement of sign affidavit as they too provide opt outs for voters unable to show appropriate forms of identification.

As for the socioeconomic variables in Models 1 through 3, African-Americans are more likely to have reported voting in the election than a grouping of non-Hispanic whites, American Indians, Hawaiians/Pacific Islanders, and others. In contrast, Asians are less likely to report voting. Respondents aged 45 and above are more likely to report voting than those 18 to 24 years old. Those with an

74. Conn. Gen. Stat. Ann. § 9-261.

75. 15 Del. Code. § 4937.

76. Ga. Code. Ann. § 21-2-417.

77. S.D. Codified Laws § 12-18-6.2.

78. Va. Code. Ann. § 24.2-643.

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education at or above a high school diploma are more likely to report voting than those without a high school degree. Family income has a positive relationship with the probability of reporting having voted. Married and female respondents are more likely to report voting than not married and male respondents, respectively. Respondents residing in battleground states are more likely to vote, while respondents who moved within the last six months are less likely to report voting.

Alternative Model Specifications

Concerns regarding some of the variables used in the Eagleton Institute study led us to estimate alternative specifications that use the November 2004 CPS data more appropriately.

First, the Eagleton Institute's race and ethnicity dichotomous variables compare African-Americans, Hispanics, and Asians to the default group of whites, American Indians, Alaskan Natives, Hawaiians/Pacific Islanders, and those reporting to be more than one race and/or ethnicity. For example, the Eagleton Institute found that African-Americans were more likely to report voting compared to whites, American Indians, Alaskan Natives, Hawaiians/Pacific Islanders, and those reporting to be more than one race and/or ethnicity.

The descriptive statistics of the data used for the alternative specifications are presented in Table 4. The analyses in Table 5 control for the effect of the individual's race and ethnicity through a set of mutually exclusive dichotomous variables for the following categories: non-Hispanic whites, non-Hispanic African-Americans, Hispanics, non-Hispanic American Indians and Alaskan Natives, non-Hispanic Asians (including Hawaiians/Pacific Islanders), and other races, including those reporting multiple races and ethnicities. For example, this division of race and ethnic groups allows us to present clearer estimates of

Table 4

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Descriptive Statistics

Variable	Mean	Standard Deviation	Minimum	Maximum
Voted	0.87	0.33	0	1
Sign name	0.26	0.44	0	1
Match signature	0.17	0.38	0	1
Non-photo ID	0.26	0.44	0	1
Photo ID	0.09	0.28	0	1
Recoded sign name	0.27	0.44	0	1
Recoded match signature	0.21	0.41	0	1
Recoded non-photo ID	0.25	0.43	0	1
Recoded photo ID	0.09	0.28	0	1
Hispanic	0.05	0.21	0	1
African-American	0.09	0.29	0	1
American Indian	0.01	0.09	0	1
Asian American	0.02	0.14	0	1
Other race	0.02	0.12	0	1
Age 25-44	0.37	0.48	0	1
Age 45-64	0.38	0.48	0	1
Age 65+	0.17	0.37	0	1
High school	0.30	0.46	0	1
Some college	0.31	0.46	0	1
College	0.20	0.40	0	1
Graduate school	0.10	0.31	0	1
Family income, \$15,000-\$29,999	0.15	0.36	0	1
Family income, \$30,000-\$49,999	0.22	0.42	0	1
Family income, \$50,000-\$74,999	0.22	0.42	0	1
Family income, \$75,000-\$149,999	0.24	0.42	0	1
Family income, \$150,000 or more	0.06	0.24	0	1
Married	0.63	0.48	0	1
Widowed	0.06	0.24	0	1
Divorced	0.10	0.30	0	1
Separated	0.02	0.13	0	1
Female	0.53	0.50	0	1
Battleground state	0.28	0.45	0	1
Competitive race	0.19	0.39	0	1
Employed	0.69	0.46	0	1
Member of workforce	0.72	0.45	0	1
Native-born citizen	0.96	0.20	0	1
Moved within last year	0.13	0.33	0	1
Home ownership	0.80	0.40	0	1
N = 54,695				

Source: Heritage Foundation calculations based on U.S. Census Bureau, Current Population Survey, November 2004: Voting and Registration Supplement, 2005.

how voter identification laws affect the voting probabilities of minorities compared to whites.

Second, the Eagleton Institute study used an ordinal family income variable as an interval-ratio variable. Using categorical variables as interval-ratio variables can lead to estimation problems, so for the purposes of this analysis, the effect of family income is controlled for by the inclusion of a series of income range dichotomous variables.